

Applicant respectfully points out that Applicant has been attempting to arrange an Examiner Interview to discuss the current rejection of the claims and the cited prior art. Applicant therefore requests that a next Official Action not be issued until Applicant has had an opportunity to hold an Examiner Interview, and, if deemed necessary, to file a supplemental response in light of the results of the Examiner Interview. It is Applicant's understanding that such an Examiner Interview will be held on December 4, 2000.

Before discussing in detail the rejections of the claims, it is believed that a brief recapitulation of some aspects of the present invention is in order. The present invention is directed to a method, system and program product which allows a remote monitoring and diagnostic computer or system, which has an ability to diagnose different types of devices, to communicate using different communication protocols which are stored within a data base. After a communication is received through a communication channel, it is analyzed to determine if there is a protocol identifier.¹ If the protocol identifier exists, a data base is searched to determine the format of the header of the communication. Once the format of the header is determined, the header of the received communication is read to determine the information contained therein. This information is utilized to determine the actual format of the data which follows. The machine to which the remote monitoring and diagnostic system is connected is a business office device such as a copier, printer, or facsimile machine, a digital camera, or another type of device.

Attention is first directed to the rejection of Claim 37 as obvious over Allen et al., which is directed to a reproduction apparatus including a communication interface having an RS-232 interface and a modem, thereby permitting both on-site and remote communication with a diagnostic and administrative device. The RS-232 interface and modem enable the use

¹See, e.g., Fig. 6, element 262 and Fig. 7.

of standard hardware and non-dedicated telephone lines for the purpose of recording apparatus usage, feature utilization, and performing diagnostic routines on the reproduction apparatus.² Signal transfer to the modem 4 occurs using the *standard RS-232 protocol*, including both an asynchronous data signal and data transmit and received signals so that the presence of the modem is transparent to the reproduction apparatus. *Thus, reproduction apparatus 1 and device 5 communicate as if they were directly connected together on an RS-232 line.* Preferably, modem 4 is Hayes compatible and capable of transmitting and receiving data at a rate of at least 1200 baud. Modem 4 may be mounted on the communications interface 6 circuit board within the reproduction apparatus or mounted externally thereof. Because modem 4 converts the RS-232 format signals utilized by the communications control and memory 7 of the communications interface 6 into analog signals suitable for transmission over an ordinary telephone line, and conversely converts analog signals received from the telephone line into standard RS-232 format signals, it is possible to connect diagnostic and administrative device 5 to reproduction apparatus machine control and diagnostic circuitry 2 either on-site or via a non-dedicated telephone system. Thus, device 5 may take the form of a laptop or portable computer with an internal modem or storage medium such as a magnetic disk drive.³

Independent Claim 37 recites a method of diagnosing a first device by *a second device which has an ability to diagnose different types of devices*, comprising the steps of transmitting, through a communication channel, first information from the first device to the second device, receiving, by the second device, the first information which has been transmitted, determining, by the second device, second information utilized by the first

² See Abstract.

³ See col. 3, line 51 - col. 4, line 7.

device, wherein the second information is a first portion of the first information, *parsing, by the second device*, a second portion of the first information transmitted by the first device *using the second information which has been determined*, wherein the second portion is different from the first portion, and diagnosing a condition of the first device by the second device using the second portion which has been parsed.

According to the Official Action, Allen et al. "disclose a reproduction system and method (Figs. 1-2) of diagnosing a first device (1 and 6) by a second device (5), which has an ability of diagnose different types of devices, wherein the first device includes a communication interface 6 for transmitting information from a reproduction apparatus 1 to the second device (an administrative device 5) which identifies a type of the reproduction apparatus 1 (type of first device), initializes a status database 20, and selects a symptom to diagnose the reasons and probabilities (condition) of the reproduction apparatus 1, (col. 5, lines 7-36)."⁴ It is respectfully submitted that Allen et al. does not disclose or suggest that its administrative device 5 has an ability to diagnose different types of "devices" such as the devices 1 and 6. Allen et al. instead discloses that the administrative device 5 has an ability to select a particular *unit* (e.g., a particular motor) to diagnose, of a reproduction apparatus to which the administrative device 5 is connected.⁵

Allen et al. disclose:⁶

Suitable computers readily usable as the diagnostic and administrative device 5 include the Toshiba T1200 laptop computer, although the invention easily also permits connection to a mini or mainframe computer located at the central area of the building in which the reproduction apparatus is located, or at a more remote location. Use of a laptop computer has the advantage that the

⁴ See Official Action, Page 4, lines 9-15.

⁵ See, e.g., col. 5, lines 7-35.

⁶ See, e.g., col. 4, lines 8-19.

diagnostic and administrative device 5 may be physically transported from apparatus to apparatus as required, while still utilizing standard equipment and providing sufficient computing power to perform all necessary diagnostic and administrative tasks.

However, for each of the databases (unit status database 20, symptom database 21, symptom to unit database 22 and unit database 23) used by the administrative device 5, Allen et al. teach only that information regarding the *units* (e.g., a particular motor or other part of the reproduction apparatus 1) is stored and available. Thus, Allen et al. does not disclose that the administrative device 5 has an ability to diagnose different types of "devices" such as the devices 1 and 6.

Additionally, Claim 37 recites "transmitting, *through a communication channel*, first information from the first device to the second device," and "determining, by the second device, second information utilized by the first device, wherein the second information is a first portion of the first information" and "*parsing, by the second device*, a second portion of the first information transmitted by the first device *using the second information which has been determined*, wherein the second portion is different from the first portion." According to the Official Action, Allen et al. discloses:⁷

determining by the second device 5, second information (such as data related to the reproduction apparatus use, feature utilization of the reproduction apparatus) utilized by the first device, wherein the second information is a first portion of the first information; parsing, by the second device, a second portion of the first information (such as the error history and billing data) using the second information which has been determined, wherein the second portion is different from the first portion; and diagnosing a condition of the first device by the second device using the second portion which has been parsed.

It is respectfully submitted that Allen et al. does not disclose or suggest the second device

⁷ See Official Action, Page 4, last line - Page 5, line 7.

parsing the the error history or billing data, using data related to the reproduction apparatus use or feature utilization of the reproduction apparatus, nor does the Official Action explain this assertion. Therefore, it is submitted that independent Claim 37 is allowable over Allen et al.

For similar reasons as discussed above with regard to independent Claim 37, it is believed that independent system Claim 42 and independent program product Claim 74 are also allowable over Allen et al.

Substantially the same arguments as set forth above apply to dependent Claims 38-42, 44-48 and 75-77, all of which depend from independent Claims 37, 42 or 74 respectively, either directly or indirectly. It is respectfully submitted that each of these dependent claims specifies additional features of the present invention which are not disclosed or suggested by Allen et al.

Attention is now directed to the rejection of Claims 70-73 as obvious over Allen et al. as applied to Claims 37 and 43 above, and further in view of Hemmady et al.

Hemmady et al. is directed to an architecture and organization of a high performance metropolitan area telecommunications packet network. Data traffic from users is connected to data concentrators at the edge of the network, and is transmitted over fiber optic data links to a hub where the data is switched. The hub includes a plurality of data switching modules, each having a control means, and each connected to a distributed control space division switch. Advantageously, the data switching modules, whose inputs are connected to the concentrators, perform all checking and routing functions, while the 1024.times.1024 maximum size space division switch, whose outputs are connected to the concentrators, provides a large fan-out distribution network for reaching many

concentrators from each data switching module. Distributed control of the space division switch permits several million connection and disconnection actions to be performed each second, while the pipelined and parallel operation within the control means permits each of the 256 switching modules to process at least 50,000 transactions per second. The data switching modules chain groups of incoming packets destined for a common outlet of the space division switch so that only one connection in that switch is required for transmitting each group of chained packets from a data switching module to a concentrator. MAN provides security features including a port identification supplied by the data concentrators, and a check that each packet is from an authorized source user, transmitting on a port associated with that user, to an authorized destination user that is in the same group (virtual network) as the source user.⁸

According to the Official Action, Fig. 20 of Hemmady et al. "shows a message format wherein the header 610 consists of the destination address 612, the source address 614, the group identifier 616, group name 618, the type of service 620, a type of service indicator 623, a protocol identifier 624. The header 610 is followed by a *header 630 to process message fragmentation* [emphasis added]. This header 630 includes the protocol identifier 638 for identifying the contents of the internal protocol which is the header of user data 640. Finally, user data 640 may be preceded for appropriate user protocols by the identity of the destination port 642 and source port 644 (col. 62, lines 15-49)."⁹

It is respectfully pointed out that, according to Hemmady et al., "The user protocol

⁸See Abstract.

⁹See Official Action, Page 7, lines 10-17.

624 assists the EUS driver in multiplexing various streams of data from the network."¹⁰ It is respectfully pointed out that there is *no explanation* in Hemmady et al. as to how the protocol identifier 638 is used for "identifying the contents of the internal protocol which is the header of user data 640." Therefore, there is no teaching of the step of "parsing, by the second device, a second portion of the first information transmitted by the first device using the second information which has been determined" as recited by independent Claim 37 of the present invention, from which Claims 70-71 depend indirectly.

Regarding the combination of Allen et al. in view of Hemmady et al., the Official Action states, "It would have been obvious at the time the invention was made to a person of ordinary skill in the art to include the protocol identifier as taught in Hemmady et al in the transmitted information from the first device to a second device in Allen in order for the second device to determine the protocol identifier utilized by the first device since *both* [emphasis added] Allen and Hemmady teach the transmission and reception of data packets from and to different devices thereby permitting both on-site and remote communication with a diagnostic and administrative device for the purpose of recording apparatus usage, feature utilization, and performing diagnostic routines on reproduction apparatus."¹¹ It is respectfully pointed out that Allen et al. does not specifically teach the transmission and reception of data packets from and to different devices, and that Hemmady et al. does not teach the transmission and reception of data packets from and to different devices to permit both on-site and remote communication with a diagnostic and administrative device for the purpose of recording apparatus usage, feature utilization,

¹⁰See col. 63, lines 20-22.

¹¹See Official Action, Page 8, lines 1-8.

and performing diagnostic routines on reproduction apparatus. Therefore, there is no clear motivation to combine these references stated by the Official Action, and it is respectfully submitted that the combination of these references does not disclose or suggest the features recited by dependent Claims 70-73.

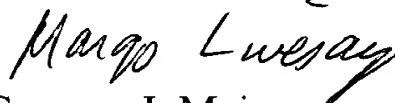
Regarding Claims 70-73, the Official Action relies on Allen et al. as disclosing the claimed subject matter as discussed above with regard to Claims 37 and 43, except for teaching that the identification of the type of the first device is a protocol identifier including a header format.¹² However, as discussed previously with regard to independent Claims 37 and 43, the claimed "determining, by the second device, second information utilized by the first device, wherein the second information is a first portion of the first information," and "parsing, by the second device, a second portion of the first information transmitted by the first device using the second information which has been determined, wherein the second portion is different from the first portion" is not disclosed or suggested by Allen et al. It is respectfully submitted that the combination of Allen et al. in view of Hemmady et al. also does not disclose or suggest these features as claimed. Thus, it is believed that dependent Claims 70-73 are allowable over Allen et al. in view of Hemmady et al.

¹²See Official Action, Page 7, lines 3-6.

In view of the foregoing comments, it is respectfully submitted that the invention defined by Claims 37-48 and 70-77 is patentable, and a swift and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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